

## CLAIMS

1. A pickup transfer apparatus for transferring an optical pickup in a radial direction of a recording medium, comprising:

a first engaging portion for holding the optical pickup;

5 a second engaging portion to be engaged with the first engaging portion;

a transfer portion for driving the second engaging portion to transfer the first engaging portion in the radial direction;

10 a calculating portion for calculating a backlash value between the first and second engaging portions in a transfer direction of the first engaging portion; and

a driving control unit for controlling the transfer portion based on the backlash value calculated in the calculating portion.

15 2. The pickup transfer apparatus according to claim 1, wherein the calculating portion calculates a total backlash value between the first and second engaging portions based on a driving amount of the transfer portion and a transfer amount of the first engaging portion when transferring the first  
20 engaging portion while reversing the transfer direction of the first engaging portion.

3. The pickup transfer apparatus according to claim 1, wherein the calculating portion calculates the backlash value between the first and second engaging portions in the transfer  
25 direction of the first engaging portion based on a total backlash value.

4. The pickup transfer apparatus according to claim 2,

further comprising a driving determining portion for determining whether or not the transfer portion is driven in accordance with the backlash value in the direction in which the first engaging portion is to be transferred; and

5           a transfer control unit for controlling the transfer of the transfer portion when it is determined that the transfer portion is driven in accordance with the backlash value in the transfer direction.

5.       The pickup transfer apparatus according to claim 4,  
10       further comprising a tracking servo portion for performing a tracking servo control of the optical pickup and a tracking servo determining portion for determining whether a tracking servo is stabilized or not,

          wherein the driving control unit drives the transfer  
15       portion in accordance with the backlash value in the direction in which the first engaging portion is to be transferred when it is determined that the tracking servo is stabilized.

6.       The pickup transfer apparatus according to claim 4,  
          wherein a driving speed in the operation for driving the transfer  
20       portion in accordance with the backlash value in the direction in which the first engaging portion is to be transferred is larger than a driving speed in the transfer control.

7.       The pickup transfer apparatus according to claim 4,  
          wherein the transfer control unit includes a transfer servo  
25       for performing a transfer servo control of the transfer portion.

8.       The pickup transfer apparatus according to claim 2,  
          further comprising:

a driving determining portion for determining whether or not the transfer portion is driven in accordance with the backlash value in the direction in which the first engaging portion is to be transferred; and

5           a tracking jump portion for performing track-jump of the optical pickup when it is determined that the transfer portion is driven in accordance with the backlash value in the transfer direction.

9.       The pickup transfer apparatus according to claim 2,  
10       wherein the transfer portion includes a stepping motor, and the calculating portion calculates the total backlash value and the backlash value between the first and second engaging portions in the transfer direction of the first engaging portion based on the number of pulses which drive the stepping motor.

15       10.   A method of transferring a pickup which transfers an optical pickup held in a first engaging portion in a radial direction of a recording medium by driving a second engaging portion to be engaged with the first engaging portion, comprising the steps of:

20           calculating a backlash value between the first and second engaging portions in a transfer direction of the first engaging portion; and

          driving the second engaging portion on the basis of a calculated backlash value to transfer the first engaging  
25       portion.